



UNITED STATES DEPARTMENT OF COMMERCE
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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKETT NO.
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10/014848 12-11-01

Graham

W00536/70005RL

EXAMINER	
W. A. Lange	
ART UNIT	PAPER NUMBER

1754

DATE MAILED:

EXAMINER INTERVIEW SUMMARY RECORD

All participants (applicant, applicant's representative, PTO personnel):

(1) Ms. Winsor (3) Mr. Graham
(2) Examiner Lange (4) Mr. Wells

Date of interview 8-26-04

Type: ☐ Telephonic ☒ Personal (copy is given to ☐ applicant ☒ applicant's representative).

Exhibit shown or demonstration conducted: ☒ Yes ☐ No. If yes, brief description: Mr. Graham presented "slides" (on

paper) showing the advantages of the claimed product.

Agreement ☒ was reached with respect to some or all of the claims in question. ☐ was not reached.

Claims discussed: as shown in attached proposed amendment

Identification of prior art discussed: U.S. Pat. 4,518,488 (Mannenberg);

Japanese 313867

Description of the general nature of what was agreed to if an agreement was reached, or any other comments: Mr. Graham

Wells stated the commercial importance of the invention.
Mr. Graham gave a presentation explaining why the in-
vention product has a higher H₂S adsorption capacity
than the prior art (due to the pore volume being (cont. on p. 2))

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

☐ 1. It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph below has been checked to indicate to the contrary, A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW (e.g., items 1-7 on the reverse side of this form). If a response to the last Office action has already been filed, then applicant is given one month from this interview date to provide a statement of the substance of the interview.

☐ 2. Since the examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action. Applicant is not relieved from providing a separate record of the substance of the interview unless box 1 above is also checked.



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Exhibit shown or demonstration conducted: ☐ Yes ☐ No. If yes, brief description: _____

Agreement ☐ was reached with respect to some or all of the claims in question. ☐ was not reached.

Claims discussed: _____

Identification of prior art discussed: _____

Description of the general nature of what was agreed to if an agreement was reached, or any other comments: *(Cont. from p. 1)*

being substantially free of the metal oxide). Ms. Winsor presented a new set of claims as attached hereto, and pointed out that Wennerberg does not disclose or suggest the metal side being one of Ca, Mg or Ba. The examiner agreed (cont. on p. 3)

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page 2 of 3

Wayne Langel
Examiner's Signature



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Claims discussed: _____

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Description of the general nature of what was agreed to if an agreement was reached, or any other comments: *(cont. from p. 2)*

that the proposed claims appeared allowable over the art of record.

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USSN 10/014,848
PROPOSED CLAIMS AMENDMENTS
FOR DISCUSSION ONLY
AUGUST 26, 2004

Claims cancelled by way of this amendment: 2, 42, 58, 62-65

1. (Currently Amended) An activated carbon-metal oxide matrix, comprising:
an activated carbon; and
between about 3% and about 15% by weight of a metal oxide selected from the group consisting of Ca, Mg, Ba, and combinations thereof; wherein the metal oxide is uniformly dispersed within the activated carbon-metal oxide matrix and the activated carbon-metal oxide matrix has a breakthrough capacity of at least ~~about~~ 0.26 gH₂S/ccC.
3. (Currently amended) The activated carbon-metal oxide matrix of claim 1 2, wherein the metal oxide is magnesium oxide.
38. (Currently amended) A method for removing an odorous compound from a gaseous stream comprising:
forming an activated carbon-metal oxide matrix, the matrix comprising between about 3% to about 15%, by weight, of a metal oxide selected from the group consisting of Ca, Mg, Ba, and combinations thereof, uniformly dispersed within the matrix, and having a hydrogen sulfide breakthrough capacity greater than ~~about~~ 0.26 gH₂S/ccC;
contacting the gaseous stream with the matrix;
sorbing the odorous compound; and
removing the gaseous stream from the matrix.
43. (Currently amended) The method of claim 38 42, wherein the metal oxide is magnesium oxide.

55. (Currently amended) A method for reducing the concentration of a sulfide present in a gaseous discharge from a waste water treatment system comprising:

providing a gaseous discharge including at least one volatile organic compound and hydrogen sulfide, wherein the gaseous discharge has a moisture content;

contacting the gaseous discharge with an activated carbon-metal oxide matrix comprising about 3% to about 15%, by weight, of a metal oxide uniformly dispersed within the matrix, and having a hydrogen sulfide breakthrough capacity greater than about 0.26 gH₂S/ccC;

sorbing the sulfide on the matrix producing a product stream having a sulfide concentration less than about 0.1 ppm; and

removing the product stream from the activated carbon-metal oxide matrix,
wherein the metal oxide is selected from the group consisting of Ca, Mg, Ba, and combinations thereof.

59. (Currently amended) The method of claim ~~55~~ 58, wherein the metal oxide is magnesium oxide.

70. (Currently amended) The method of any one of claims 38 and 55, wherein the activated carbon-metal oxide matrix has a breakthrough capacity of at least about 0.3 gH₂S/ccC.

71 (Currently amended) An ~~aetivate~~ activated carbon-metal oxide matrix, comprising:

an activated carbon; and

a metal oxide;

wherein the metal oxide is uniformly dispersed within the activated carbon-metal oxide matrix, and

wherein the activated carbon-metal oxide matrix has a pore volume substantially free of the metal oxide, and wherein the metal oxide is selected from the group consisting of Ca, Mg, Ba, and combinations thereof.

72. (Currently amended) An activated carbon-metal oxide matrix formed by
preoxidizing a carbonaceous material to form ~~peroxidized~~ preoxidized
carbonaceous material;
grinding the ~~peroxidized~~ preoxidized carbonaceous material;
combining the ground ~~peroxidized~~ preoxidized carbonaceous material with a metal
oxide and a coal tar pitch to form a mixture;
extruding the mixture to form an extrudate;
carbonizing the extrudate to form a char; and
activating the char to form an activated carbon-metal oxide matrix, wherein the
metal oxide is uniformly dispersed therein,
wherein the metal oxide is selected from the group consisting of Ca, Mg, Ba, and
combinations thereof.